



Toughcloud delivers secure, encrypted cloud storage by sharding data across multiple clouds, where *you* control the encryption keys.

WHAT IS IT?

Toughcloud is an integral component of the Lokblok Security Ecosystem that provides advanced secure file storage for sensitive information in the cloud that is only recoverable by the Owner. It's the result of Lokblok's commitment to threshold-based recovery for both keys AND data ensuring the safety and recovery of digital assets. Specifically, Toughcloud functions seamlessly with a range of our other products: Toughkey – a Common Criteria EAL 6+ certified Hardware Security Module (HSM), ToughID Live Attestation Identification used by our KYC/LiveID partners, Toughbrowser – our application-specific secure browser that only runs approved applications and approved URL sites, Toughnet - our Zero Trust Network, Toughbox – our innovative key and split knowledge management system for secret and key recovery, and when an added layer of security is desired, Toughvault, an encrypted local disk where whitelisted applications can run from. All of these solutions are designed to work in harmony to create an impenetrable workspace and ecosystem to secure your data.

WHAT DOES IT DO?

Toughcloud presents a reliable and ultra-secure solution for storing sensitive data across multiple clouds. It employs a method known as data sharding to encrypt and split data into multiple fragments using the data Owner's key, often referred to as 'encrypted shards'. These shards are then distributed across well-known and trusted cloud service providers situated in a single or multiple regional locations, depending on your legal requirements and preference.

KEY FEATURES:

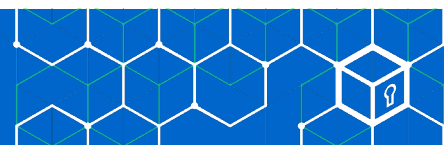
Fault-tolerant and secure data sharding:



Lokblok Zero Trust Ecosystem

Toughcloud introduces a cutting-edge, highly resilient, file encryption, storage, and recovery scheme, which guarantees the ability to recover a minimum threshold of encrypted file shards in the event of a cloud server failure or disruption. Most uniquely, Toughcloud provides a key recovery mechanism based on a K of N split knowledge threshold where the value 'K' can represent a minimum number of Recovery Agents required to reconstruct the key that will recover the file on the Owner's device, while 'N' represents the total number of Recovery Agents.

Enhanced data protection: Toughcloud differs from other cloud sharding solutions due to its exceptional split knowledge key management and encryption process to secure and bind files to the data Owner. The platform uses and strongly recommends using keys rooted in hardware to encrypt the data and employs a unique solution called Toughbox to enrol and recover these keys from publicly sharable data.



Safe data reconstitution: The encrypted data shards produced by Toughcloud are virtually impossible to reconstitute without knowing several factors. In the most secure mode, you need to have something physical you hold, like a Toughkey USB or Toughcard smart card. You need to input something you know like a password in combination with the physical Toughkey or Toughcard device. You have set a minimum number of Recovery Agents to recover or delegate the file to someone you trust that may reconstitute the recovery key for the file.

Flexible data storage: Toughcloud can integrate with existing on premise or cloud storage services that utilize S3 storage that allows businesses to store and access any amount of data from anywhere on the on the web as well as support cloud mirroring and backup type services.

WHY USE TOUGH CLOUD?

Lokblok's Toughcloud revolutionizes the way businesses and individuals perceive data storage, and especially recovery of sensitive data. It promises a wealth of benefits, including enhanced security, operational efficiency, and regulatory compliance.

Enhanced security: Toughcloud takes security to a whole new level with its innovative use of encrypted data sharding and decentralized storage. It scatters your sensitive data into multiple encrypted shards and distributes them across various locations. The distributed nature of this setup makes it exceedingly difficult for attackers to access your complete data without knowing the exact number of shards, their specific locations, and most importantly, the private key you hold that is used to encrypt and decrypt them.

Compliance with regulations: Toughcloud can use a FIPS 140-2 Level 3 compliant HSM, for authentication and encryption services signifies its strict adherence to the stringent regulatory frameworks of different regions. Not a fan of hardware? We have innovative solutions for software and hybrid private key usage too. For companies operating in regulated industries, it offers the peace of mind that comes from knowing their data is stored in compliance with applicable laws

and guidelines. This commitment to regulatory compliance, along with robust security measures, makes it a highly appealing choice for businesses worldwide.

WHY TOUGH CLOUD IS UNIQUE

Toughcloud leverages unique technology and design to deliver unrivalled security solutions. The Lokblok team created solutions that were approved by the military to protect national secrets and are applying them here. Unlike traditional cloud storage services that store data in a single location using a single key owned by the cloud service provider, Toughcloud distributes shards of your data encrypted by your personal key across multiple clouds. Its use of cutting-edge encryption, secure key management, and decentralized storage design distinguishes it from other solutions in the market.

SUMMARY

In this digital age, the security, ownership and control of your data is paramount. As threats become increasingly sophisticated, you need an equally advanced solution to protect your data from breaches and attacks. Lokblok's Toughcloud offers such a solution.

With its unique combination of encrypted data sharding, secure key management, key and data recovery, and compliance with regulatory standards, Toughcloud ensures that your data is both safe and legally compliant. The compatibility with other Lokblok solutions offers a holistic, in-depth defense strategy to safeguard your information.

In conclusion, if you are seeking an advanced, reliable, and secure solution for your data storage needs that is controlled by *your* key, Toughcloud is the answer. It's not just a storage solution; it's a holistic, multi-layered defense strategy designed to protect your most valuable digital assets. Invest in Toughcloud today and take a crucial step towards fortifying your digital world.